

CLAIMS

1. Electronic equipment (10), which includes
- camera means (12) for forming data on an object located in the imaging direction, in which case the said camera means (12) include at least two camera units (CAM1, CAM2) and
 - data processing means (11), which are arranged to process the data formed by the camera means (12), according to the currently chosen imaging mode of the equipment (10), in order to form image information, characterized in that, in the equipment (10), the mutual position of the camera units (CAM1, CAM2) relative to each other is arranged to be altered to correspond to the current imaging mode.
2. Equipment (10) according to Claim 1, characterized in that the mutual position of the camera units (CAM1, CAM2) relative to each other is arranged to be altered by the camera units (CAM1, CAM2) being manually moved by the user.
3. Equipment (10) according to Claim 1 or 2, which additionally includes a display component (19) arranged on one side of the equipment (10), characterized in that the camera units (CAM1, CAM2) are arranged on the opposite side of the equipment (10) relative to the display component (19).
4. Equipment (10) according to any of Claims 1 - 3, characterized in that the distance (A) between the camera units (CAM1, CAM2) is fixed.
5. Equipment (10) according to any of Claims 1 - 3, characterized in that the distance (A) between the camera units (CAM1, CAM2) can be adjusted.

6. Equipment (10) according to any of Claims 1 - 5, characterized in that the camera units (CAM1, CAM2) are connected to each other.
- 5 7. Equipment (10) according to any of Claims 1 - 6, characterized in that the camera units (CAM1, CAM2) are arranged to be turnable relative to each other.
- 10 8. Equipment (10) according to any of Claims 1 - 7, characterized in that means (14, 15, 16.1 - 16.4) are arranged in the equipment (10), for managing the imaging modes and for processing data, in a manner according to the selected imaging mode.
- 15 9. Equipment (10) according to any of Claims 1 - 6, characterized in that the data processing means (11, 16.1) are arranged to form 3D image information from the data formed using the camera units (CAM1, CAM2).
- 20 10. Equipment (10) according to Claim 9, characterized in that the equipment (10) includes means (16.3) for processing image errors.
- 25 11. Equipment (10) according to any of Claims 1 - 10, characterized in that the data-processing means (11, 16.1) are arranged to combine the data formed using the camera units (CAM1, CAM2), at least partly to increase the resolution of the image information.
- 30 12. Equipment (10) according to any of Claims 1 - 11, characterized in that the data-processing means (11, 16.2) are arranged to combine the data formed using the camera units (CAM1, CAM2), at least partly to permit a panorama-imaging mode.

13. Equipment (10) according to any of Claims 1 - 12, characterized in that the turning of the camera units (CAM1, CAM2) relative to each other is arranged with the adjustment of the distance (A) between the camera units (CAM1, CAM2).

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14. System for forming image information, which includes

- camera means (12) for forming data on an object located in the imaging direction, in which case the said camera means (12) include at least two camera units (CAM1, CAM2), and
- data processing means (11), which are arranged to process the data formed using the camera means (12), in a manner according to the currently selected imaging mode, in order to form image information,

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15 characterized in that the mutual position of the camera units (CAM1, CAM2) relative to each other is arranged to be altered to correspond to the current imaging mode.

15. System according to Claim 14, characterized in that the mutual position of the camera units (CAM1, CAM2) is arranged to be altered by the user manually moving the camera units (CAM1, CAM2).

16. System according to Claim 14 or 15, which additionally includes a display component (19), characterized in that the camera units (CAM1, CAM2) are aimed in the opposite direction relative to the display component (19).

17. System according to any of Claims 14 - 16, characterized in that the distance (A) between the camera units (CAM1, CAM2) is fixed.

18. System according to any of Claims 14 - 16, characterized in that the distance (A) between the camera units (CAM1, CAM2) can be adjusted.

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19. System according to any of Claims 14 - 18, characterized in that the camera units (CAM1, CAM2) are connected to each other.

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20. System according to any of Claims 14 - 19, characterized in that the camera units (CAM1, CAM2) are arranged to be turn-able relative to each other.

10 21. System according to any of Claims 14 - 20, characterized in that the system includes means (14, 15, 16.1 - 16.4) for managing the imaging modes and for processing data in a manner according to the selected imaging mode.

15 22. System according to any of Claims 14 - 21, characterized in that the data processing means (11, 16.3) are arranged to form 3D image information from the data formed using the camera units (CAM1, CAM2).

20 23. System according to Claim 22, characterized in that the system includes means (14.1) for processing image errors.

24. System according to any of Claims 14 - 23, characterized in that the data processing means (11, 16.1) are arranged to
25 combine the data formed using the camera units (CAM1, CAM2), at least partly to increase the resolution of the image information.

25. System according to any of Claims 14 - 24, characterized
30 in that the data processing means (11, 16.2) are arranged to combine the data formed using the camera units (CAM1, CAM2), at least partly to permit a panorama-imaging mode.

26. System according to any of Claims 14 - 25, characterized
35 in that the turning of the camera units (CAM1, CAM2) relative

to each other is arranged with the adjustment of the distance (A) between the camera units (CAM1, CAM2).

27. Method in electronic equipment (10) for forming image in-
5 formation, in which camera means (12) are used to perform im-
aging of an object in the imaging direction, which camera
means (12) include at least two camera units (CAM1, CAM2), the
data formed by which is processed by processing means (11), in
a manner according to the currently selected imaging mode, in
10 order to form image information, characterized in that, in the
method, the mutual position of the camera units (CAM1, CAM2)
relative to each other is altered, to correspond to the cur-
rent imaging mode.

15 28. Method according to Claim 27, characterized in that, in
the method, the mutual position of the camera units (CAM1,
CAM2) relative to each other are altered by the user manually
moving the camera units (CAM1, CAM2).

20 29. Method according to Claim 27 or 28, in which the equipment
(10) additionally includes a display component (19) arranged
one side, characterized in that imaging is performed from the
opposite side of the equipment (10) relative to the display
component (19).

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30. Method according to any of Claims 27 - 29, characterized
in that imaging is performed with the camera units (CAM1,
CAM2) at a constant distance (A) from each other.

30 31. Method according to any of Claims 27 - 29, characterized
in that the distance (A) between the camera units (CAM1, CAM2)
is adjusted.

32. Method according to any of Claims 27 - 31, characterized in that the camera units (CAM1, CAM2) are turned relative to each other.

5 33. Method according to any of Claims 27 - 32, characterized in that the imaging is performed to form 3D image information.

34. Method according to Claim 33, characterized in that the data are processed to process image errors.

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35. Method according to any of Claims 27 - 34, characterized in that the data are combined at least partly with each other to increase the image resolution.

15 36. Method according to any of Claims 27 - 35, characterized in that the data are combined at least partly with each other to permit a panorama-imaging mode.

37. Method according to any of Claims 27 - 36, characterized in that the camera units (CAM1, CAM2) are turned while adjusting the distance (A) between the camera units (CAM1, CAM2).

38. Program product (11, 15) for implementing the method according to the invention, which program product (11) is arranged to receive data, formed using camera means (12), on an object in the imaging direction and to process it in a manner according to the selected imaging mode, to form image information, and which data include data formed by at least two camera units (CAM1, CAM2) aimed in the imaging direction, which data the program product (11, 15) is arranged to process in a manner according to the selected imaging mode, characterised in that the program product (11, 15) includes one or more components (15.1) for detecting the mutual position of the camera units (CAM1, CAM2).

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39. Program product (11, 15) according to Claim 38, characterized in that the program product (11, 15) includes one or more components (15.2) for selecting a selected imaging mode on the basis of the mutual position of the camera units (CAM1, CAM2).

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40. Program product (11, 15) according to Claim 38 or 39, characterized in that the program product (11, 15) includes one or more components (11) for processing the data formed using the camera units (CAM1, CAM2), on the basis of the mutual position of the camera units (CAM1, CAM2).

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41. Program product (11, 15) according to any of Claims 38 - 40, characterized in that the program product (11) includes one or more components (16.3) for forming 3D image information.

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42. Program product (11, 15) according to Claim 41, characterized in that the program product (11) includes one or more components (16.3) for processing image errors.

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43. Program product (11, 15) according to any of Claims 38 - 42, characterized in that the program product (11) includes one or more components (16.1, 16.2) for at least partly combining data.

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44. Program product (11, 15) according to any of Claims 38 - 43, characterized in that the program product (11) includes one or more components (16.1) for at least partly combining data to increase the resolution of the image information.

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45. Program product (11, 15) according to any of Claims 38 - 44, characterized in that the program product (11) includes one or more components (16.2) for at least partly combining data to form panorama image information.

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46. Program product (11, 15) according to any of Claims 38 -
45, characterized in that the program product (15) includes
one or more components (16.4) for aligning the camera units
(CAM1, CAM2) in a manner according to the selected imaging
5. mode.

47. Camera module (12) for forming data from an object in the
imaging direction, characterized in that the camera module
(12) includes at least two camera units (CAM1, CAM2) aligned
10 in the imaging direction, the mutual position of which rela-
tive to each other is arranged to be altered to correspond to
the selected imaging mode.

48. Camera module (12) according to Claim 47, characterized in
15 that the mutual position of the camera units (CAM1, CAM2)
relative to each other is arranged to be altered by adjusting
the distance between the camera units (CAM1, CAM2), for which
purpose index patterning (31) is arranged in the camera module
(12), to lock the distance to correspond to the imaging mode.